

Title (en)

Method for producing a shaft of a gas turbine engine

Title (de)

Verfahren zur Herstellung einer Welle eines Gasturbinenriebwerks

Title (fr)

Procédé de fabrication d'un arbre de turbine à gaz

Publication

EP 2730395 A1 20140514 (DE)

Application

EP 13192470 A 20131112

Priority

DE 102012022260 A 20121113

Abstract (en)

The method involves placing structured rods placed onto concave areas of sinusoidal structure of end areas of conical, rod-shaped core, and wrapping the core and the end areas with carbon fiber strips. The rods are removed, and carbon fiber layers are radially pressed into concave zones. Filler rods are placed into the zones. The layers and the end areas are wrapped with the strips inclined at specific degrees. Resin is injected into a resin injection mold, heated and cured. A metallic load-input end piece (29) is inserted into end areas of tubular center part and joined to the part.

Abstract (de)

Die Erfindung bezieht sich auf ein Verfahren zur Herstellung einer Radialwelle eines Gasturbinenriebwerks, welche aus +/- 45° Lagen 24, Null-Lagen 32 und +/- 30° Lagen 25 aus Kohlenstofffaserverbund aufgebaut ist und über sinusoidale Anschlussbereiche mit Lasteinleitendstücken 29 verbunden ist.

IPC 8 full level

B29C 70/46 (2006.01); **B29C 70/48** (2006.01)

CPC (source: EP US)

B29C 70/462 (2013.01 - EP US); **B29C 70/48** (2013.01 - EP US); **B29D 23/00** (2013.01 - EP US); **F16C 3/026** (2013.01 - EP US); **B29L 2031/75** (2013.01 - EP US); **B29L 2031/7504** (2013.01 - EP US); **F16C 2360/23** (2013.01 - EP US)

Citation (applicant)

- DE 102008056018 A1 20100506 - ROLLS ROYCE DEUTSCHLAND [DE]
- DE 102009037049 A1 20110217 - ROLLS ROYCE DEUTSCHLAND [DE]
- GB 1599292 A 19810930 - UNION CARBIDE CORP
- DE 4107222 C2 19941215 - GKN AUTOMOTIVE AG [DE]

Citation (search report)

- [A] US 2003114231 A1 20030619 - BRADLEY DOUGLAS J [US], et al
- [A] DE 102007051517 A1 20090430 - UNIV DRESDEN TECH [DE]

Cited by

DE102016202337A1; CN109760346A; CN112253606A; WO2019216848A3

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2730395 A1 20140514; **EP 2730395 B1 20151021**; **EP 2730395 B8 20160302**; DE 102012022260 A1 20140528; US 2014130964 A1 20140515; US 9211684 B2 20151215

DOCDB simple family (application)

EP 13192470 A 20131112; DE 102012022260 A 20121113; US 201314076847 A 20131111